

## **A GENERIC RESEARCH STRATEGY:**

FLIP it!<sup>™</sup> was first developed in 1988 with a 7th grade class scheduled for weekly "library" class, because I was frustrated and desperate:

Every year I saw students stumble their way through research assignments because they hadn't internalized and retained the library / information skills they had already been taught.

We needed a self-sustaining information problem-solving strategy; a process students could learn and use as needed, no matter what the content of the problem they were trying to solve.

So that year I scrapped my regular curriculum, and asked the kids to help me find a way to help them succeed at information problem-solving.

First we identified four basic steps in the research process:

1. Define the specific problem.
2. Identify and locate likely resources.
3. Gather information: take notes; organize, analyze, and summarize the information found.
4. Put together and present the findings.

Then we re-examined and evaluated the individual skills and strategies necessary for each of those four steps. Step four was actually the easiest, because for most problems the form of final presentation has already been specified (usually by the teacher giving the assignment). And step two, locating the appropriate resources (which is where most traditional library skills are concentrated), seemed to take care of itself if enough attention had been paid to step one. For most students the biggest stumbling block was step three, figuring out how to USE the information they'd found to create the necessary final product.

Finally, I asked the kids to devise a four-letter mnemonic for our information strategy: a simple word to help us remember the procedures necessary to solve the problem.

Lots of individual and group discussion, including the realization that the four steps did not always have to be sequential, since the process could move both backwards and forwards as needed... and we agreed that

**Focus** on your topic,

**Locate** the appropriate resources,

**Investigate** and **Implement** the **Information** you find, and finally,

**Produce** the results of your findings,

gave us the right words and letters for the process.

We decided to add **IT** for *Intelligent Thinking* (as in, did you use your brains to best advantage?), and as shorthand for **IF I know . . . THEN I should:** as an evaluation checkpoint, and so **FLIP it!** was officially christened.

Note that the mnemonic came *from* the process, rather than trying to fit a process into a word (i.e. trying to use the name of the school as a title for the process).

When the kids decided on **FLIP it!** as our mnemonic, someone commented that sometimes it could really be PILF, since they knew what the final product should be -- but had to work backwards to know how/what to do to accomplish it. That's why the phrase **FLIP it!** has been so successful: it's easy to remember, sounds just silly enough to obviate any "serious thinking" fears, and reminds the kids that they *will* need to flip back and forth (evaluating, rethinking, revising) as they work through their info-problem.

## **AN ACTIVITY-BASED STRATEGY:**

**FLIP it!**<sup>TM</sup>'s foundation is the fulcrum of

### **IF/THEN, or: WHAT DO I ALREADY KNOW THAT WILL HELP ME HERE?**

This use of "Prior knowledge" is at the heart of all problem-solving. I teach students to think of **IF** as *I-FACTS: stuff I already know*, that will *impact* (have an effect on) the situation at hand. I-Facts, therefore, are the prior knowledge about a subject that kids almost always do have, but all too often forget to use.

Each step leads the searcher from the initial questions to the final answers by following a logical progression of critical thinking skills. The problem-solver may also need to move back or forward within the questioning/researching process. **FLIP it!**<sup>TM</sup> supports such a continuum of learning by providing a basic structure for the entire process. By "FLIP-ing" the process back to the target questions identified in the initial FOCUS step, and by keeping in mind that key operational question:

### **so IF (I know this) THEN (what can/should I do next)?**

the student has a framework or scaffolding (supportive structure) to help him work efficiently toward the needed solution / final presentation.

Sample assignment:

- FOCUS:** Reports on women scientists  
names of women scientists to choose from
- LINKS:** Students need to know:  
how/where to find useful biographical resources  
how to use the biographical resources effectively and efficiently
- INPUT:** Students will gather information on scientists':  
major discoveries/inventions, etc.  
importance of scientific accomplishments  
personal info (birth, death, etc.)
- PAYOFF:** Students will prepare posters about their scientists, for display in a "Science Hall of Fame" exhibit

Each stage of the process actually uses all four of the steps within itself, either intrinsically or as an external set of checkpoints.

In order to take effective notes (INPUT), you must

- keep your FOCUS questions in mind,
- cite the sources you used (as part of the LINK to a broader sphere of information),
- decide how to categorize (IMPLEMENT) the information for most effective use, and
- then present the results (PAYOFF) as per the project requirements.

A student who just copies out information without considering how and why to use those facts or even give the original author credit for them, has basically FLOPPed his way through this particular stage of the process, without a sense of direction (back to focus, again) for what he is doing.

## **WHY FLIP it!<sup>™</sup> works:**

### ***Focus: FLIP it!<sup>™</sup> is learner-centered.***

The constant reiteration of "What do I/we already know, that will help me figure out what I now need to know/do?" reinforces the belief that the student is already a successful learner. I don't think any of the other Information Skills frameworks put enough emphasis on stressing the use of the kids' base of prior knowledge. Telling students to use what they already know also tells them that being knowledgeable is important and valuable

### ***Links: FLIP it!<sup>™</sup> flows naturally from step to step, and back within itself.***

Constant, ongoing self-evaluation of both process and product is also an integral part of the strategy. At each step, the learner needs to Refocus back to the original concerns, to make sure that the target questions are being answered and acted upon. Each step, therefore, links naturally and reasonably both into the next step and back to the beginning.

Using "**If. . . Then:**" as a self-evaluative checkpoint is an inherent part of every step in **FLIP it!<sup>™</sup>** Knowing 'what to do when' as in: "did I answer the questions I need to? do I have what I need to progress? Have I done what's necessary?" are demonstrations of intelligent thinking. If/Then reminds the student that he is accountable for his own success, and that this can and should be a self-motivated, self-accountable, self-sufficient process.

### ***Implementation: FLIP it!<sup>™</sup> is a generic problem-solving framework.***

FLIP it!<sup>™</sup> can be applied to any form of information problem-solving, whether it is a simple reference question, a more complex research project, a lab report, a math problem, or even a personal quest. I never introduce FLIP it!<sup>™</sup> as a unique process or set of skills for a single use or application. Instead, I utilize it to help solve a genuine Information need -- demonstrating its use as an efficient framework for working through an already assigned problem. As we're working through the problem, I repeatedly ask "OK, IF we know this, THEN what do we need to do/figure out next?"

Only after we have used the process several times do I point out that this is actually a generic strategy that can be used for all kinds of problems. I do display posters that say: "FLIP it!<sup>™</sup> for successful problem-solving", and I will often remind kids (who have already used the process) to FLIP it!<sup>™</sup> when they are "stuck" at some stage of any other info-problem. Because we've been using FLIP it!<sup>™</sup> to help us find answers in all subject areas, it becomes an easily transferable process for students to use in many ways.

### ***Product and Process: FLIP it!<sup>™</sup> uses every-day language.***

Yes, the strategies do involve task definition, and search strategies, and information assessment, and even synthesis and evaluation, but I've never heard kids use such terminology on their own. The original mnemonic created by that first group of seventh graders was

**F**ocus,  
**L**ocations,  
**I**nformation Implementation, and  
**P**roduct.

Over the years of development and use, the original words have sometimes changed to meet specific situations, but the letters are still the same, reflecting the four basic steps of the problem solving process. And besides: you only need only one hand -- four fingers -- to make sure you've worked your way through the checkpoints!

**FLIP it!<sup>™</sup>** helps students develop the skills they need to become effective learners, thinkers, and problem-solvers who are:

- Goal-oriented (WHAT do I need to accomplish?)
- Purposeful and Productive (WHY do I need to do this?)
- Strategic and Self-Evaluative (HOW will I know what to do/ HOW well did I succeed?)